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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,719	10/27/2000	Hiroki Nakajima	20-4764P	4838

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EXAMINER

COLLINS, CYNTHIA E

ART UNIT

PAPER NUMBER

1638

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14

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/697,719

Applicant(s)

NAKAJIMA ET AL.

Examiner

Cynthia Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 February 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-69 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

This Office Action is in response to the Response filed February 14, 2003.

This Office action contains a new requirement for Election/Restriction, therefore the previous requirement mailed January 14, 2003 is withdrawn. The Office apologizes for any inconvenience to Applicant.

#### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

- I. Claims 1-9, 20, 21, 28-32, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protoporphyrin IX binding subunit of a magnesium chelatase derived from a photosynthetic microorganism, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 300, for example.
- II. Claims 1-8, 10-11, 20, 21, 28-32, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protoporphyrin IX binding subunit of a magnesium chelatase derived from tobacco, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 300, for example.
- III. Claims 1-7, 12, 13, 20, 21, 28-31, 37, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protein comprising a peptide having the amino acid sequence of SEQ ID NOS:53 or 54, a plant produced therefrom and method of using said plant, classified in class 800, subclass 288, for example.

- IV. Claims 1-7, 14-15, 20, 21, 28-31, 37, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protein comprising a peptide having the amino acid sequence of SEQ ID NOS:55 or 56, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 288, for example.
- V. Claims 1-7, 16-21, 28-31, 37, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protein comprising a peptide having the amino acid sequence of SEQ ID NOS:57, 58, 59 or 60, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 288, for example.
- VI. Claims 1-7, 20-25, 28-31, 37, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protoporphyrinogen IX oxidase protein derived from soybean and lacking the ability to oxidize protoporphyrinogen IX, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 278, for example.
- VII. Claims 1-7, 20-24, 26-31, 37, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protoporphyrinogen IX oxidase protein derived from *Chlamydomonas* and lacking the ability to oxidize protoporphyrinogen IX, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 278, for example.

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- VIII. Claims 1-7, 20, 21, 28-31, 33-35, 37, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protoporphyrin IX binding subunit of a ferrochelatase derived from barley, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 300, for example.
- IX. Claims 1-11, 20, 21, 28-31, 33-34, 36, 37, 43, 45, 47, 49 and 51, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a protoporphyrin IX binding subunit of a ferrochelatase derived from cucumber, a plant produced therefrom and methods of using said plant, classified in class 800, subclass 300, for example.
- X. Claims 38-42, 44, 46, 48 and 50, drawn to a method of producing an herbicide resistant plant comprising transforming a plant with a polynucleotide encoding a modified coproporphyrinogen III oxidase and a method of using the produced plant, classified in class 800, subclass 278, for example.
- XI. Claims 52, 53, 54, 57-61, 64 and 67, drawn to a method of giving resistance to weed control compounds to plants, a plant cell and a plant made by said method, and a method of using said plant to control weeds or to select a plant with a protoporphyrinogen IX oxidase inhibitory-type compound, said plant cell comprising a gene encoding a protein having a specific affinity for an herbicidal substance, having no capability of modifying said substance and being substantially free from framework regions of variable regions in an immunoglobulin in addition to an altered form of a protoporphyrinogen oxidase enzyme, classified in class 800, subclass 300, for example.

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- XII. Claims 52, 53, 55, 57-60, 62, 65 and 68, drawn to a method of giving resistance to weed control compounds to plants, a plant cell and a plant made by said method, and a method of using said plant to control weeds or to select a plant with a 5-enolpyruvylshikamate-3-phosphate synthase inhibitory-type compound, said plant cell comprising a gene encoding a protein having a specific affinity for an herbicidal substance, having no capability of modifying said substance and being substantially free from framework regions of variable regions in an immunoglobulin in addition to an altered form of a 5-enolpyruvylshikamate-3-phosphate enzyme, classified in class 800, subclass 300, for example.
- XIII. Claims 52, 53, 56-60, 63, 66 and 69, drawn to a method of giving resistance to weed control compounds to plants, a plant cell and a plant made by said method, and a method of using said plant to control weeds or to select a plant with a 5-enolpyruvylshikamate-3-phosphate synthase inhibitory-type compound, said plant cell comprising a gene encoding a protein having a specific affinity for an herbicidal substance, having no capability of modifying said substance and being substantially free from framework regions of variable regions in an immunoglobulin in addition to an altered form of a glyphosate oxidoreductase enzyme, classified in class 800, subclass 300, for example.

The inventions are distinct, each from the other because of the following reasons:

Inventions I-IX are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different

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inventions are unrelated because the method encompassed by each of Groups I-IX have different starting materials and different end products, and have different modes of operation. Hence, each method of producing an herbicide resistant plant is patentably distinct from each of the other methods.

Inventions X-XIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are unrelated because the produced plant cell and plant of each Groups is compositionally, functionally and structurally distinct, due to the presence of different transgenes encoding different enzymes. Hence, each method of producing an herbicide resistant plant is patentably distinct from each of the other methods.

Inventions I-IX and X-XIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are unrelated because none of the methods of Groups I-IX can be used to make any of the plant cells of Groups X-XIII. In addition, none of the methods of Groups X-XIII can be used to make any of the plants of Groups I-IX. Each Group requires different types of transgenes encoding different classes of enzymes.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, recognized divergent subject matter, and because the search required for one of the groups is not required for another, restriction for examination purposes as indicated is proper.

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Applicant is advised that the reply to this requirement to be complete within one month (not less than 30 days) must include an election of the invention to be examined even though the requirement be traversed (37 CFR § 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR § 1.48(b) and by the fee required under 37 CFR § 1.17(i).

***Remarks***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC  
May 2, 2003

DAVID T. FOX  
PRIMARY EXAMINER  
GROUP 180 1638

